ABSTRACT

SOME BIOLOGICAL PARAMETERS OF PREDATORY MITE *Cheletomimus bakeri* (ACARI: CHEYLETIDAE)

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Development, fecundity and prey consumption of *Cheletomimus bakeri* (Acari: Cheyletidae) feeding on *Tetranychus cinnabarinus* (Acari: Tetranychidae) were studied at different temperatures (15, 20, 25, 30, 35 ^{o}C), in the laboratory at 65 ± 10 % RH and 16 L: 8D. The development periods of egg, immature stages and adults of *C. bakeri* decreased significantly with increasing temperatures. Egg and total development periods of *C.bakeri* at 20, 25, 30 ve 35 ^{o}C were obtained 13.86, 7.98, 5.07, 4.08 days and 58.66, 41.51, 21.21, 22.92 days, respectively. The mean total and daily fecundity were highest at 20 ^{o}C and 30 ^{o}C, respectively, and they were statistically different from that obtained at 20, 25 and 30 ^{o}C. The net reproductive rate (R_0= 13.31 ♀/♀) was highest at 20 ^{o}C. The longest mean generation time (T_0 = 89.36 days) occurred at 20 ^{o}C and the shortest (28.22 days) at 30 ^{o}C. While the highest intrinsic rate of increase for *C.bakeri* was found at 30 ^{o}C (0.0570 ♀/♀/day), the lowest was obtained at 20 ^{o}C (0.0290♀/♀/day) and 25 ^{o}C (0.0330 ♀/♀/day). *C.bakeri* showed an increasing consumption by increasing prey densities and, the number of *T. cinnabarinus* males consumed by *C.bakeri* significantly changed depending on prey densities. The highest number of adult males consumed by *C.bakeri* per day was 4.63, 4.70 and 4.60 if confined to 40, 80 and 160 individuals, respectively.

Key words: Cheyletidae, development, longevity, *Tetranychus cinnabarinus*, predation, fecundity, life table